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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/501,493	02/09/2000	John Marland Garth	ST9-99-130	3937

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EXAMINER
VO, LILIAN

ART UNIT	PAPER NUMBER
2127	

DATE MAILED: 10/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/501,493	GARTH ET AL.
	Examiner	Art Unit
	Lilian Vo	2127

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 August 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1 - 57</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1 - 11, 20 - 30 and 39 - 49</u> is/are rejected.

7)☒ Claim(s) <u>12 - 19, 31 - 38 and 50 - 57</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   In view of the appeal brief filed on 8/3/04, PROSECUTION IS HEREBY REOPENED.

New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following

two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37

CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a

supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or

other evidence are permitted. See 37 CFR 1.193(b)(2).

2.   Claims 1 - 57 are pending.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claims 1 - 3, 20 - 22 and 39 - 41 are rejected under 35 U.S.C. 103(a) as being .

unpatentable over IBM Technical Disclosure Bulletin "Resource Management System for

Multimedia Devices" (hereinafter IBM Bulletin) in view of Isip, Jr. et al. (US 6,427,143,

hereinafter Isip).

5.   Regarding **claims 1, 20, and 39,** IBM Bulletin discloses a method of processing data

comprising the steps of:

identifying memory constraints (page 4, 1st paragraph: number of concurrently executing

tasks is bounded by memory);

identifying processing capabilities (page 4, 1st paragraph: number of concurrently

executing tasks is bounded by processor capabilities); and

determining a number of tasks to be started in parallel based on the identified memory

constraints and processing capabilities (page 4, 1st paragraph: number of concurrently executing

tasks is bounded by memory and processor capabilities).

IBM Bulletin did not disclose the tasks are the load and sort processes. However, the

concept of the load and the sort processes are considered well known in the art and can also be

found in Isip, in which the load and sort processes are performed, based on the constraint factors

(fig. 2, col. 6, lines 35 – 41, col. 12, lines 38 – 51). Isip also discloses that reader subtasks can

run concurrently with other tasks of the load utility, such as a sort subtasks (col. 8, lines 60 – 67).

It would have been obvious for an ordinary skill in the art to recognize the load and sort task of

Isip can also be related to the tasks as disclosed by IBM Bulletin which perform a particular

function. Therefore, it would have been obvious for an ordinary skill in the art, at the time the

invention was made, to combine Isip's teaching together with IBM Bulletin to implement the

tasks with the load and sort processes so that data can be processed more efficiently within the

resource constraint.

6.   Regarding **claim 2**, IBM Bulletin did not teach the additional limitation as claimed.

Nevertheless, the step determining a number of build processes based on the number of sort

processes is considered common knowledge in the art per Isip's invention (fig. 1, col. 3, line 46 –

col. 4, line 7).

        It would have been obvious to one of ordinary skill in the art, at the time the invention

was made, to combine this concept to the disclosure of IBM Bulletin and to realize this common

feature shown by Isip as one in the pertained art would know that build process is a

consequential step directly dependent on sort process.

7.   Regarding **claim 3**, IBM Bulletin did not teach the additional limitation as claimed.

Nevertheless, Isip discloses that the sort input records are built after each row is loaded (col. 3,

lines 46 – col. 4, line 7). It would have been obvious for one of an ordinary skill in the art, to

recognize the number of built processes are based on the sort processes, thus it would not be

possible for the number of sort processes to exceed a number of indexes to be built.

        It would have been obvious to one of ordinary skill in the art, at the time the invention

was made, to combine this concept to the disclosure of IBM Bulletin and to realize this common

feature shown by Isip as one in the pertained art would know that build process is a

consequential step directly dependent on sort process and that it would not be possible for the

number of sort processes to exceed a number of indexes to be built.

8.   **Claims 21 – 22 and 40 – 41** are rejected on the same ground as stated in claims 2 and 3

above.

9.   Claims 4 – 6, 23 – 25, and 42 - 44 are rejected under 35 U.S.C. 103(a) as being

unpatentable over IBM Technical Disclosure Bulletin "Resource Management System for

Multimedia Devices" (hereinafter IBM Bulletin) in view of Isip, Jr. et al. (US 6,427,143,

hereinafter Isip) as applied to claims 1, 20, and 39 above, and further in view of Bordonaro et al.

(US Pat 5,307,485, hereinafter Bordonaro).

10.   Regarding **claim 4,** the combination of IBM Bulletin and Isip did not teach the number of

load processes does not exceed a number of partitions to be loaded. Nevertheless, this feature

has been taught by Bordonaro (fig. 3, 310 shows N partitioned tasks and 312 distributes over the

N processors). In fig. 2, 202 shows that as the records from storage device are loaded, col. 4,

line 62 – col. 6, line 27 describes the fact that N partitioned tasks corresponds to N processors,

which implies the limitation, in which the number of load processes does not exceed a number of

partitions to be loaded. Note that fig. 2 corresponds to fig. 3 in that records loaded into memory

are to be part of the portion from which tasks are created (col. 5, lines 58 – 60) and subsequently,

divided in to partitions for load processes, as shown in fig. 3.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to integrate the feature as taught by Bordonaro to the combination of IBM Bulletin and Isip so that various memory constraints would still be suitable to apply the desired processes (Bordonaro: col. 1, lines 33 – 56).

11.   Regarding **claim 5**, IBM Bulletin discloses that the number of concurrently executing tasks is bounded by processor capabilities. The combination of IBM Bulletin and Isip did not teach the load and sort processes does not exceed processing capabilities. However, it is rejected based on the indicated rational above since Bordonaro comprehensively taught both load (described above) and sort processes (col. 1, lines 57 – 68), which are then processed by the N processors.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to realize the advantage of combining the features disclosed by Bordonaro to the combination of IBM Bulletin and Isip for overall efficiency purposes.

12.   Regarding **claim 6**, IBM Bulletin discloses that the number of concurrently executing tasks is bounded by processor memory. The combination of IBM Bulletin and Isip did not teach the memory utilized by the load and sort processes does not exceed memory constraints. Nevertheless, Bordonaro teaches the load and sort processes directly dependent on memory constraints (col. 5, lines 54 – 62).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to realize the advantage of combining the features disclosed by Bordonaro to the

combination of IBM Bulletin and Isip by recognizing that in designing computer system to load

data, in which balancing the loads become an issue, to take into account the memory constraints.

13.   **Claims 23 – 25, and 42 – 44** are rejected on the same ground as stated in claims 4 – 6

above.

14.   Claims 7 – 11, 26 – 30 and 45 - 49 are rejected under 35 U.S.C. 103(a) as being

unpatentable over IBM Technical Disclosure Bulletin "Resource Management System for

Multimedia Devices" (hereinafter IBM Bulletin) in view of Isip, Jr. et al. (US 6,427,143,

hereinafter Isip) as applied to claims 1, 20, and 39 above, and further in view of an "Official

Notice".

15.   Regarding **claims 7 – 11, 26 – 30, and 45 – 49**, the combination of IBM Bulletin and Isip

did not teach the additional limitations as claimed. Nevertheless, the examiner takes an "Official

Notice" that the limitations narrowed by these claims are considered obvious and furthermore a

matter of design choice, since applicants have not disclosed that the claimed limitations solve

any stated problem or are for any particular purpose and it appears that the invention would

perform equally well without the claimed features. Therefore, it would have been obvious to one

of ordinary skill in the art, at the time the invention was made, to efficiently utilize all the

processing capabilities required for the desired task.

Allowable Subject Matter

16.   **Claims 12 – 19, 31 – 38, and 50 - 57** are objected to as being dependent upon a rejected

base claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims.

Response to Arguments

17.   Applicants' arguments with respect to claims 1 - 3, 20 - 22 and 39 - 41 have been

considered but are moot in view of the new ground(s) of rejection.

18.   Applicants' arguments with respect to claims 4 – 6, 23 – 25, and 42 – 44 fail to comply

with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a

patentable invention without specifically pointing out how the language of the claims patentably

distinguishes them from the references.

Conclusion

19.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Lilian Vo whose telephone number is 571-272-3774. The

examiner can normally be reached on Monday - Thursday, 7:30am - 5pm.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

        Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

                                        Lilian Vo
                                        Examiner
                                        Art Unit 2127

lv
October 4, 2004
                                        MENG-AL T. AN
                                        SUPERVISORY PATENT EXAMINER
                                        TECHNOLOGY CENTER 2100